

WE CLAIM:

1. A system for providing a runnable computer simulation model comprising:
a design automation software product for enabling a designer to create a simulation model including interconnected component and/or subsystem models;
simulation content file creation means for creating a simulation content file that includes information describing the simulation model; and
a simulation player software product including means for reading the simulation content file, that enables an end user to run the simulation model based upon the information in the simulation content file, but which does not allow the end user to add or remove component models, subsystem models or interconnections of the simulation model.
2. The system of claim 1 wherein said design automation software product enables the designer to identify parameters of the simulation model, component models and/or subsystem models that may be inspected and/or varied by the end user, and to specify one or more allowed values of said parameters,
wherein the simulation content file further includes information identifying said parameters and allowed values, and
wherein the simulation player software product enables the end user to vary only said identified parameters of the simulation model, component models and/or subsystem models to only said allowed values.
3. The system of claim 1 wherein the simulation model comprises an optical, opto-electronic or electronic simulation model.
4. The system of claim 1 wherein the information describing the simulation model includes information specifying the component models and/or subsystem models comprising the simulation model, and the interconnections therebetween.
5. The system of claim 1 wherein the information describing the simulation model includes simulation instructions specifying a sequence of operations to be carried out during running of the simulation model by the simulation player software product.

6. The system of claim 1 wherein the information describing the simulation model includes information defining a graphical representation of the simulation model, and wherein the simulation player software product is able in use to display said graphical representation on a computer display.
7. The system of claim 1 wherein the simulation content file creation means encrypts at least a part of the simulation content file to prevent unauthorized parties from accessing and/or altering the information describing the simulation model.
8. The system of claim 2 wherein the allowed values of said parameters comprise one or both of a range of values specified as a minimum value and a maximum value, and a list of discrete values.
9. The system of claim 1 wherein the simulation content file creation means comprises a software component for use with the design automation software product.
10. The system of claim 9 wherein the simulation content file further comprises content including one or more of data and/or document files, a digital image, a web site URL, and contact details, and wherein a user is able to control the content file creation component to include said content at the time of creation of the file.
11. The system of claim 10 wherein the simulation model comprises a model of a component or system product, and the runnable computer simulation model is provided for distribution by a vendor for evaluation of said product by prospective customers.
12. The system of claim 11 wherein the document and/or data files comprise data and promotional information relating to said product, and the simulation player software product enables the end user to open said files and inspect their contents.

13. The system of claim 11 wherein the digital image comprises a company logo of said vendor, and the simulation player software product is able in use to display the logo on a computer display.

14. The system of claim 11 wherein the web site URL identifies a web site of said vendor, and the simulation player software product enables the end user to open a web browser at said web site.

15. The system of claim 11 wherein the contact details include one or more of a physical address, an email address, a telephone number and a fax number, and the simulation player software product is able in use to display said contact details on a computer display.

16. A method of providing a runnable computer simulation model comprising the steps of:

a designer creating a simulation model using a design automation software product, said simulation model including interconnected component and/or subsystem models;

creating a simulation content file that includes information describing the simulation model;

providing the simulation content file to an end user; and

the end user running the simulation model using a simulation player software product that includes means for reading the simulation content file, and that enables an end user to run the simulation model based upon the information in the simulation content file, but which does not allow the end user to add or remove component models, subsystem models or interconnections of the simulation model.

17. The method of claim 16 wherein said design automation software product enables the designer to identify parameters of the simulation model, component models and/or subsystem models that may be inspected and/or varied by the end user, and to specify one or more allowed values of said parameters,

wherein the simulation content file further includes information identifying said parameters and allowed values, and

wherein the simulation player software product enables the end user to vary only said identified parameters of the simulation model, component models and/or subsystem models to only said allowed values.

18. The method of claim 16 wherein the simulation model comprises an optical, opto-electronic or electronic simulation model.

19. The method of claim 16 wherein the step of providing the simulation content file comprises distributing the file using an information network.

20. The method of claim 19 wherein the information network is the internet.

21. The method of claim 19 wherein distribution is achieved by making the simulation content file available for download from a web site.

22. A computer program product comprising a computer readable storage medium having embodied upon it computer readable instructions that on computer execution implement:

a design automation software environment for enabling a designer to create a simulation model including interconnected component and/or subsystem models; and

simulation content file creation means for creating a simulation content file that includes information describing the simulation model, for use with a simulation player software product that enables an end user to run the simulation model based upon the information in the simulation content file but which does not allow the end user to add or remove component models, subsystem models or interconnections of the simulation model.

23. The computer program product of claim 22 wherein said design automation software environment enables the designer to identify parameters of the simulation model, component models and/or subsystem models that may be inspected and/or varied by an end user, and to specify one or more allowed values of said parameters that may be set by the end user, and

wherein said simulation content file further includes information identifying said identified parameters and allowed values.

24. The computer program product of claim 22 wherein the simulation model comprises an optical, opto-electronic or electronic simulation model.

25. The computer program product of claim 22 wherein the information describing the simulation model includes information specifying the component models and/or subsystem models comprising the simulation model, and the interconnections therebetween.

26. The computer program product of claim 22 wherein the information describing the simulation model includes simulation instructions specifying a sequence of operations to be carried out during running of the simulation model by a simulation player software product.

27. The computer program product of claim 23 wherein the allowed values of said parameters comprise one or both of a range of values specified as a minimum value and a maximum value, and a list of discrete values.

28. The computer program product of claim 22 wherein the simulation content file creation means encrypts at least a part of the simulation content file to prevent unauthorized parties from accessing and/or altering the information describing the simulation model.

29. The computer program product of claim 22 wherein the simulation content file creation means comprises a software component forming an element of the design automation software environment.

30. The computer program product of claim 29 wherein the simulation content file further comprises content including one or more of data and/or document files, a digital image, a web site URL, and contact details, and wherein a user is able to control the content file creation component to include said content at the time of creation of the file.

31. The computer program product of claim 30 wherein the simulation model comprises a model of a component or system product, and the runnable computer simulation model is provided for distribution by a vendor for evaluation of said product by prospective customers.

32. A computer program product comprising a computer readable storage medium having embodied upon it computer readable instructions that on computer execution implement:

simulation content file reading means for reading a simulation content file that includes information describing a simulation model, which model includes interconnected component and/or subsystem models; and

a simulation player software environment that enables an end user to run the simulation model based upon the information in the simulation content file, but which does not allow the end user to add or remove component models, subsystem models or interconnections of the simulation model.

33. The computer program product of claim 32 wherein the simulation content file further includes information identifying parameters of the simulation model, component models and/or subsystem models that may be inspected and/or varied by the end user, and one or more allowed values of said parameters, and

wherein said simulation player software environment enables the end user to vary only said identified parameters to only said allowed values.

34. The computer program product of claim 32 wherein the simulation model comprises an optical, opto-electronic or electronic simulation model.

35. The computer program product of claim 32 wherein the information describing the simulation model includes information defining a graphical representation of the simulation model, and wherein the simulation player software environment is able in use to display said graphical representation on a computer display.

36. The computer program product of claim 32 wherein the simulation content file reading means comprises a software component forming an element of the simulation player software environment.

37. The computer program product of claim 32 wherein the simulation content file further comprises content including one or more of data and/or document files, a digital image, a web site URL, and contact details.

38. The computer program product of claim 37 wherein the simulation model comprises a model of a component or system product, and the runnable computer simulation model is provided for distribution by a vendor for evaluation of said product by prospective customers.

39. The computer program product of claim 38 wherein the document and/or data files comprise data and promotional information relating to said product, and the simulation player software environment enables the end user to open said files and inspect their contents.

40. The computer program product of claim 38 wherein the digital image comprises a company logo of said vendor, and the simulation player software environment is able in use to display the logo on a computer display.

41. The computer program product of claim 38 wherein the web site URL identifies a web site of said vendor, and the simulation player software environment enables the end user to open a web browser at said web site.

42. The computer program product of claim 38 wherein the contact details include one or more of a physical address, an email address, a telephone number and a fax number, and the simulation player software environment is able in use to display said contact details on a computer display.

43. A system for providing a runnable computer simulation model of optical, opto-electronic or electronic components or systems, said system comprising:

a design automation software product for enabling a designer to create a simulation model of optical, opto-electronic or electronic components or systems, including interconnected component and/or subsystem models;

a simulation content file creation software component for use with said design automation software product for creating a simulation content file that includes information describing the simulation model; and

a simulation player software product including a software component for reading said simulation content file, that enables an end user to run the simulation model based upon the information in the simulation content file, but which does not allow the end user to add or remove component models, subsystem models or interconnections of the simulation model.

44. The system of claim 43 wherein said design automation software product enables the designer to identify parameters of the simulation model, component models and/or subsystem models that may be inspected and/or varied by the end user, and to specify one or more allowed values of said parameters,

wherein the simulation content file further includes information identifying said parameters and allowed values, and

wherein the simulation player software product enables the end user to vary only said identified parameters of the simulation model, component models and/or subsystem models to only said allowed values.

45. The system of claim 43 wherein the simulation content file further includes one or more of data and/or document files, a digital image, a web site URL, and contact details.

46. The system of claim 45 wherein:

the simulation model comprises a model of an optical, opto-electronic or electronic component or system product, and the runnable computer simulation model is provided for distribution by a vendor for evaluation of said product by prospective customers;

the document and/or data files comprise data and promotional information relating to said component or system product, and the simulation player software product enables the end user to open said files and inspect their contents;

the digital image comprises a company logo of said vendor, and the simulation player software product is able in use to display the logo on a computer display;

the web site URL identifies a web site of said vendor, and the simulation player software product enables the end user to open a web browser at said web site; and

the contact details include one or more of a physical address, an email address, a telephone number and a fax number, and the simulation player software product is able in use to display said contact details on the computer display.

47. A method of providing a runnable computer simulation model of optical, opto-electronic or electronic components or systems, said method comprising the steps of:

a designer creating a simulation model of optical, opto-electronic or electronic components or systems, using a design automation software product, said simulation model including interconnected component and/or subsystem models;

creating a simulation content file that includes information describing the simulation model;

providing the simulation content file to an end user; and

the end user running the simulation model using a simulation player software product that includes means for reading the simulation content file, and that enables an end user to run the simulation model based upon the information in the simulation content file, but which does not allow the end user to add or remove component models, subsystem models or interconnections of the simulation model.

48. The method of claim 47 wherein said design automation software product enables the designer to identify parameters of the simulation model, component

models and/or subsystem models that may be inspected and/or varied by the end user, and to specify one or more allowed values of said parameters,

wherein the simulation content file further includes information identifying said parameters and allowed values, and

wherein the simulation player software product enables the end user to vary only said identified parameters of the simulation model, component models and/or subsystem models to only said allowed values.

49. A computer program product comprising a computer readable storage medium having embodied upon it computer readable instructions that on computer execution implement:

a design automation software environment for enabling a designer to create a simulation model of optical, opto-electronic or electronic components or systems, including interconnected component and/or subsystem models; and

a simulation content file creation software component for use with said design automation software product for creating a simulation content file that includes information describing the simulation model for use with a simulation player software product that enables an end user to run the simulation model based upon the information in the simulation content file but which does not allow the end user to add or remove component models, subsystem models or interconnections of the simulation model.

50. The computer program product of claim 49 wherein said design automation software environment enables the designer to identify parameters of the simulation model, component models and/or subsystem models that may be inspected and/or varied by an end user, and to specify one or more allowed values of said parameters that may be set by the end user, and

wherein said simulation content file further includes information identifying said identified parameters and allowed values.

51. The computer program product of claim 49 wherein the simulation content file further includes one or more of data and/or document files, a digital image, a web site URL, and contact details.

52. The computer program product of claim 51 wherein:

the simulation model comprises a model of an optical, opto-electronic or electronic component or system product, and the runnable computer simulation model is provided for distribution by a vendor for evaluation of said product by prospective customers;

the document and/or data files comprise data and promotional information relating to said component or system product, and the simulation player software product enables the end user to open said files and inspect their contents;

the digital image comprises a company logo of said vendor, and the simulation player software product is able in use to display the logo on a computer display;

the web site URL identifies a web site of said vendor, and the simulation player software product enables the end user to open a web browser at said web site; and

the contact details include one or more of a physical address, an email address, a telephone number and a fax number, and the simulation player software product is able in use to display said contact details on the computer display.

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53. A computer program product comprising a computer readable storage medium having embodied upon it computer readable instructions that on computer execution implement a simulation player software environment including a software component for reading a simulation content file that includes information describing an optical, opto-electronic or electronic simulation model, which model includes interconnected component and/or subsystem models

wherein the simulation player software environment enables an end user to run the simulation model based upon the information in the simulation content file, but which does not allow the end user to add or remove component models, subsystem models or interconnections of the simulation model.